SOLID WASTE PERMITTING
SUBMISSION INSTRUCTION NO. 20

TERMINATION OF POST-CLOSURE ACTIVITY EVALUATION

Developed by:

Virginia Department of Environmental Quality
Office of Waste Permitting and Compliance
629 East Main Street
Richmond, Virginia 23219

V. 01/2012

TABLE OF CONTENTS

I. APPLICABILITY

These instructions are applicable to solid waste disposal facilities that are requesting either a termination or reduction of post-closure care (PCC) monitoring and maintenance activities as allowed by the Virginia Solid Waste Management Regulations (VSWMR), promulgated by the Virginia Waste Management Board, effective December 18, 1988, as amended.

This submission instruction provides information regarding the documentation to be submitted in an evaluation for termination or reduction in PCC activities. The evaluation should address each of the following applicable PCC monitoring and maintenance activities for which PCC termination is being requested.

- Groundwater Monitoring
- Surface Water Monitoring
- Landfill Gas Monitoring
- Leachate Management
- Stormwater Management
- Final Cover System Maintenance
- Maintenance of monitoring systems and other appurtenances

The following discussions provide insight as to whether a facility should apply for or the DEQ will consider termination or reduction in PCC monitoring and maintenance activities based on a facility's current status in regards to groundwater, landfill gas, and leachate management at the site.

A. Groundwater Monitoring Considerations

1. **Corrective Action**

   If the facility is undergoing corrective action for groundwater at the time of certification/evaluation, the facility will not be released from PCC groundwater monitoring requirements for groundwater until corrective action has been completed. A minimum of three (3) years of groundwater monitoring (and a minimum of 10 sample test results) indicating groundwater protection standards, established pursuant to 9 VAC 20-81-250.A.6., have not been exceeded is required before the owner or operator may request the Department to reduce or terminate the PCC requirements for groundwater monitoring. Sufficient data is required to support the trend analysis required to demonstrate that constituent levels are decreasing.

   Some remedial activities rely on physical, biological, or chemical alteration of the compounds and involve the introduction of a catalyst or chemical product to initiate the desired reaction. During this type of remediation, the groundwater chemistry in the treatment zone is not representative of groundwater conditions either before or following completion of the remedy. Therefore, the period of time following the active phase of the remedy (e.g., injection/application of treatment

materials or groundwater extraction), during which the groundwater conditions (physical, biological, chemical or hydrogeologic) remain effected by the treatment, is considered part of the corrective action.

When the corrective action involves *in-situ* treatment- chemical, biologic or physical- all groundwater samples should be representative of conditions prior to the treatment or from areas not affected by the treatment (outside the treatment zone) both chemically and physically before the effectiveness of remedial activities is evaluated. For example, a remedy that involves the introduction of potassium permanganate would be considered *in progress* until such a time that the potassium and/or magnesium concentrations in the wells located in the treatment zone are at background levels. Caution should be exercised by the facility so that additives to the groundwater are not over-applied, extending the treatment period unnecessarily. For extraction techniques, groundwater flow should revert to essentially pre-extraction conditions prior to completing the corrective action.

2. **Semi-annual or quarterly groundwater monitoring events**
   If all required groundwater monitoring has not been conducted according to the regulations and the facility permit during the PCC period, the DEQ may require additional monitoring to evaluate any potential impacts on the groundwater in the vicinity of the facility to ensure protection of human health and the environment. The DEQ may require the owner or operator to submit sufficient information to demonstrate the monitoring that has been performed, even if it is less than 10/30 years, is protective and appropriate.

3. **Permittee response to request for modification of monitoring network**
   In most cases the GW monitoring network is reviewed annually by DEQ upon submission of the GW Annual Report for each facility. Upon the technical review of the GW Annual Report, adjustments in the GW monitoring network may be necessary on occasion. The Department will not release the owner or operator from PCC groundwater monitoring requirements if the owner or operator has not installed additional monitoring wells, when requested, and the monitoring system at the facility is inadequate. An adequate groundwater monitoring plan/network should be in place for sufficient time to allow the groundwater trends to be evaluated accurately. The adequacy of the monitoring system will be based on the most recent annual groundwater monitoring report.

4. **Failure to implement assessment or phase II monitoring or corrective action**
   The Department will not release the owner or operator from PCC groundwater monitoring requirements if monitoring or corrective action has not been implemented as required. Additional groundwater monitoring events may be required by the DEQ to obtain information that was not obtained due to the improper monitoring of groundwater.

5. **Submittal of required reports, notifications, and data**
   Data from all monitoring events should have been submitted for review during the PCC period. If not, the DEQ may ask for the data to be submitted. Additional monitoring may be required if data gaps exist in the most recent monitoring events.

6. **Monitoring records**
   The Department will not release the owner or operator from PCC groundwater monitoring requirements if monitoring records are incomplete. Monitoring records are used to determine the impact (if any) a facility has had on groundwater. Without complete information, the DEQ is unable to determine the impact the facility has had on the groundwater. Monitoring data or additional monitoring events may be required prior to considering the release of the owner or operator from PCC requirements.

7. **Off-site factors influencing groundwater**
   Off site factors influencing groundwater should be identified and discussed in the evaluation along with the projected duration of the influence on the groundwater flow.

8. **Landfill Gas**
   If a facility currently is performing active extraction to mitigate landfill gas migration, the facility should demonstrate that landfill gas generated by the waste unit will not impact groundwater. The Department will not release the owner or operator from PCC groundwater monitoring requirements if landfill gas migration is or has the potential to impact groundwater.

9. **Increasing constituent levels**
   If an appropriate statistical test indicates any constituent levels have increasing trends, the facility will typically not be released from PCC groundwater monitoring. The Department may release a facility from PCC groundwater monitoring during any phase of monitoring as long as:
   - corrective action is complete;
   - no constituent exceeds a groundwater protection standard; and
   - a trend analysis clearly indicates all constituent levels are either stable or decreasing.

   The trend cannot be influenced by remedial measures that may have been performed at the site that were not part of a required corrective action plan. Any decision to release a facility from post closure groundwater monitoring should consider how close the constituent levels are to the groundwater protection standard.

10. **Well Abandonment**
    If an owner/operator is allowed to discontinue PCC groundwater monitoring, monitoring wells should continue to be maintained or a detailed well abandonment procedure should be submitted to the DEQ for approval prior to wells being abandoned unless a procedure is already provided in the facility permit.

B. Landfill Gas Monitoring Considerations

1. **Corrective action**
   If corrective measures have not been put in place as required by the VSWMR, facility permit, or facility Landfill Gas Management or Remediation Plans to correct a gas migration problem, the Department will not release the owner from PCC gas monitoring and control requirements. The impact of the remedial measures on the gas levels at the site should be considered when evaluating release from PCC gas monitoring and control requirements.

2. **Effectiveness of corrective action**
   The Department will not release the owner or operator from PCC gas monitoring and control requirements if remedial measures have been ineffective in decreasing methane levels. If the measures have been effective, evaluating gas levels for a period of time (minimum 3 years) after the gas levels have decreased below regulatory thresholds should be required prior to releasing the facility from PCC gas monitoring requirements.

3. **Active systems**
   If an active system has been installed, the owner or operator should demonstrate there is no potential for gas migration beyond the facility boundary or into facility structures as a result of discontinuing this system. Evaluating gas levels for a period of time (minimum 3 years) without the system operating should be required prior to releasing the facility from PCC gas monitoring and control requirements.

4. **Monitoring records**
   If the facility has not maintained monitoring records for the PCC period, then the Department will not release the owner or operator from PCC gas monitoring and control requirements and will require additional monitoring. Section 9 VAC 20-80-200.C. requires records of monitoring to be kept through closure and post-closure and failure to do so may constitute a violation.

5. **CDD and Industrial Landfills**
   In the case of CDD and Industrial Landfills that were previously exempt from the landfill gas monitoring requirements of 9 VAC 20-81-200, monitoring probes should be installed at the facility boundary sufficient to demonstrate gas migration is not occurring unless the owner or operator has demonstrated to DEQ that gas

migration could not occur along a specific pathway owing to geologic or hydraulic barriers. Landfill gas monitoring should be performed a minimum of quarterly for one year to demonstrate to DEQ that gas migration is not exceeding regulatory standards at the facility boundary or in facility structures.

If gas is detected, a decomposition gas venting system and gas monitoring program may be required in accordance with 9 VAC 20-80-200 to control gas migration.

If gas is not detected, the results of the monitoring period should be discussed in Section F. of the TPCA Evaluation. No further landfill gas monitoring activities may be necessary.

6. **Response to request for modification of monitoring network**
Prior to terminating PCC, in most cases, the Department has reviewed the gas monitoring network and has determined the network is adequate as part of permit issuance or corrective action. The Department will not release the owner or operator from PCC gas monitoring and control requirements if the owner or operator has failed to install additional gas monitoring or gas control measures if requested or if the gas monitoring network is inadequate based on new information. An adequate gas monitoring plan/network should be in place for a minimum of 1 year to allow the migration of gas to be evaluated. A permitted and approved Landfill Gas Management Plan will be considered adequate unless the DEQ has requested additional gas wells, appurtenances or information.

7. **Monitoring frequency and location**
The Department may not release the owner or operator from PCC landfill gas monitoring and control requirements if the gas levels at the facility cannot or have not been evaluated via subsurface monitoring (such as monitoring probes or gas monitoring wells) or demonstrated to DEQ that gas migration could not occur along a specific pathway because of geologic or hydraulic barriers. The DEQ may require additional monitoring if gas monitoring has not been conducted or satisfactory demonstration has not been made as required during the PCC period.

The most recent gas monitoring events will be evaluated in order to determine if additional gas monitoring events are warranted. The DEQ will require additional gas monitoring if data gaps exist in the most recent monitoring events.

Ongoing gas migration that exceeds standards at a facility will be evaluated by compliance staff to determine if further compliance or enforcement action is necessary. The DEQ may also require the owner or operator to submit information sufficient to demonstrate that the monitoring that has been performed in accordance with the PCC Plan.

8. **Well/Probe Abandonment**
   If an owner or operator is allowed to discontinue PCC landfill gas monitoring, gas wells and probes should be maintained or a detailed well/probe abandonment procedure should be submitted to the DEQ for approval – unless one is already provided in the facility permit, prior to wells/probes being abandoned.

C. Leachate Management Considerations

1. **Facilities without Liners/Leachate Collection Systems**
   Facilities that do not have a leachate collection system should still provide a discussion on leachate management in Section G. of the TPCA Evaluation. The TPCA Evaluation should indicate that no leachate management system is in place. Any maintenance activities occurring as a result of leachate seeps or discharges should also be discussed.

2. **Facilities collecting Groundwater/Leachate in a Toe Drain**
   Facilities that are collecting groundwater/leachate in a toe drain should provide the information requested in Section G. of the TPCA Evaluation and be sure to address the discharge of waste and waste constituents.

II. INTENT

Section 10.1-1410.2 B. of the Code of Virginia and 9 VAC 20-81-170.C. of the VSWMR require the facility owner or operator to submit a certification at least 180 days prior to the completion of the PCC monitoring and maintenance period. The certification should be signed by the owner/operator and a professional engineer (P.E.) licensed in the Commonwealth and should state that PCC monitoring and maintenance have been completed in accordance with the PCC plan. The certification should be accompanied by an evaluation, prepared by a P.E. or professional geologist (P.G.), assessing and evaluating the landfill's potential harm to human health and the environment in the event that PCC monitoring and maintenance are discontinued.

This submission instruction contains the basic information that should be included in the Termination of Post-Closure Activity (TPCA) Evaluation submitted to the DEQ for evaluation of the PCC period. Based on the TPCA Evaluation, the Department will determine if the PCC period will be extended or if the owner will be fully or partially released from PCC requirements.

The content of the TPCA Evaluation will depend on which PCC monitoring or activities have been proposed for termination. If an owner or operator requests to discontinue some, but not all of the PCC monitoring or activities, the TPCA should address the potential harm to human health and the environment presented by the activities proposed to be discontinued. In addition, the evaluation should summarize the status of the PCC responsibilities and monitoring that will continue. For example, requests to discontinue gas monitoring do not need to include detailed information on groundwater monitoring; however, the status of the groundwater monitoring program should be mentioned in the evaluation.

These instructions have been developed to assist the Owner or Operator with completing a TPCA Evaluation and Certification that meets the requirements of the Code of Virginia and VSWMR with appropriate technical content to make the required demonstrations. These instructions have been developed as guidance, not a rule. They have not gone through public comment. They may be altered to fit facility-specific conditions where needed. These submission instructions are an outline of the *minimum* technical content that should be addressed within the TPCA Evaluation.

III. REPORT FORMAT

The TPCA Evaluation prepared according to this submission instruction is intended to be a standalone technical document. However, the DEQ recognizes that some of the technical information requested by this submission instruction may have been submitted under separate cover as part of a permit application, previous major or minor permit modification applications, annual reports, or corrective action reports. In these cases, a summary of such technical information should be included in the TPCA Evaluation.

The TPCA Evaluation should start with a title page and table of contents followed by the following sections and discussions. The title page should identify the facility name, location, and permit number; name and contact information for the owner/operator; name and contact information for the P.E. or P.G. who prepared the evaluation; and document date. In addition, the header or footer of each page should include the facility name, permit number, document title, revision date, and page number.

A. Executive Summary

Provide a brief summary of the evaluation and the basis for the request for release or reduction in PCC activities or monitoring. Indicate the activities that are proposed to be discontinued and the activities that will continue. If all permitted activities are proposed for termination, state so in this section. Discuss any proposed future use of the site.

B. Introduction

Include the purpose of the report, discuss any applicable report limitations, and define terminology used in the evaluation.

C. Facility History and Site Description

A facility may consist of several treatment, storage or disposal units, including unlined disposal areas. Provide the following information:

1. A description of the types and quantities of wastes disposed at the facility.
2. The date of operation of the facility (dates facility began receiving waste and ceased accepting waste). The facility should support these dates with applicable documentation.
3. The date the facility was certified as having been closed by a P.E. (also indicate if the DEQ acknowledged the facility had been properly closed).
4. Disposal method used, trench fill, valley fill, area fill, cell fill, etc.
5. A description of any groundwater corrective action or gas remediation performed at the facility as applicable.
6. Information on any other permits issued by EPA, DEQ, or other state agencies for this facility.

7. Discuss any change in adjacent land use over time. The site may have been developed in a rural area that may have changed to an urban or suburban area.

D. Groundwater Evaluation

The groundwater evaluation should discuss the potential for groundwater to harm human health or the environment. This evaluation should include the following:

1. **Potentiometric Map**
   Provide a potentiometric surface map including the following features:
   - Facility boundary;
   - the waste management boundary as defined in the original permit issued by VDH, VDWM or the DEQ;
   - the disposal unit boundary or boundaries;
   - groundwater monitoring well locations labeled with ID #;
   - groundwater elevations (most recently available data)'
   - potentiometric surface contours;
   - the direction of groundwater flow;
   - topographic contours reflecting current site conditions (no more than 5' elevation);
   - a bar scale;
   - north arrow
   - permanent structures and access roads; and
   - surface water features.

2. **Aquifer Recognition**
   Identify the aquifer including the nature of the uppermost aquifer (i.e. overburden, sparolite, bedrock) and the nature of the groundwater table (i.e. confined, semi-confined, or unconfined).

3. **Groundwater flow rate**
   Provide a discussion of any on/off-site activities influencing the groundwater flow at the site.

4. **Groundwater Monitoring Well Network**
   Provide a description of the existing groundwater monitoring network, identifying the upgradient and downgradient monitoring wells.

5. **Groundwater Monitoring History**
   Provide a discussion of the history of monitoring of the site, the beginning and the end of the different phases of monitoring performed and when, if any, corrective action program was implemented at the site. Include a discussion of the constituents detected at the site. Provide all monitoring data during the post-closure care period.

6. **Groundwater Monitoring Requirements**
   Provide a summary of the groundwater monitoring requirements contained in the facility permit, applicable regulations, post-closure care plan, or any Order or compliance agreement entered into with the DEQ and a status report on how these requirements were met.

7. **Variances or other DEQ Approvals**
   Indicate any variances granted from groundwater monitoring requirements.

8. **Groundwater Contamination Statistical Trends**
   Provide a discussion and data summary of the statistical trends seen in groundwater contaminant levels over the life of the monitoring program.

9. **Discharges to Surface Water**
   Provide a discussion of any discharges to surface water over the life of the facility including those resulting from leachate outbreaks or groundwater discharge.

10. **Historical Impacts**
    Provide a discussion of any historical impacts to human health or the environment attributed to groundwater contamination.

11. **Corrective Action**
    Provide a discussion of the status of the corrective action program, if applicable.

12. **Groundwater Evaluation**
    Provide a discussion of any potential for harm to human health or the environment if groundwater monitoring were discontinued. The analysis should include, but is not limited to the following:

    a. Statistical Analysis
       A statistical analysis of the all groundwater data during the post closure care period or other period as specified here should be provided. A trend analysis should also be prepared for each constituent recognized historically above background. The data from the last five years or a sufficient period of monitoring (based on flow rate and direction) should indicate no increasing trends in constituent levels.

    b. Risk Assessment
       A risk assessment performed based on the constituents that are being detected in the groundwater.

    c. Parent/Daughter Constituent Discussion
       A discussion of the constituents detected in the groundwater and any detected parent or daughter products and their levels. Any potential regulated daughter products that could potentially be derived from the detected constituents.

d. Facility's Potential Impact on Human Health and the Environment
Provide a discussion describing the landfills potential impact on human health and the environment based on the analysis performed in the event post-closure activities are discontinued.

e. Adjacent Property Impacts
Identify any public or private drinking water wells on all adjacent properties that may be impacted or are in the pathway of any projected contaminant plume.

E. Surface Water Evaluation

A surface water evaluation should be prepared that assess the impact if any of the closed disposal unit on surrounding/adjacent surface waters. This evaluation should include the following:

1. **Surface Water Site Map**
Provide a site map containing the following items:
   - facility boundary;
   - the waste management boundary;
   - the disposal unit boundaries;
   - surrounding surface water bodies within the facility boundary
   - potentiometric contours;
   - topographic contours reflecting current site conditions,
   - bar scale; and
   - North arrow.

2. **Surface Water Identification**
Provide a description of all surrounding/adjacent surface waters including assessment of quality and flow characteristics.

3. **Surface Water Impacts**
Provide a discussion of any discharges to surface water over the life of the facility including those resulting from leachate outbreaks or groundwater discharge and remediation activities performed in response to those discharges.

4. **Surface Water Monitoring Summary**
Provide a summary of the surface water monitoring requirements contained in the facility permit, applicable regulations, post-closure care plan, or any Order or compliance agreement entered into with the DEQ and a status report on how these requirements were met.

5. **Surface Water Monitoring Data and Analysis**
Provide a discussion and data summary of the statistical trends seen in surface water contaminant levels over the life of the monitoring program.

6. **Corrective Action**
   Provide a discussion of the status of the corrective action program, if applicable.

7. **Surface Water Evaluation**
   Provide a discussion of any potential for harm to human health or the environment if surface monitoring were discontinued. The analysis should include, but is not limited to the following:

   a. Risk Assessment
      A risk assessment performed based on the constituents that are being detected in the surface water should be provided.

   b. Parent/Daughter Constituent Discussion
      Provide a discussion of the constituents detected in the surface water and any detected parent or daughter products and their levels. Discuss any potential regulated daughter products that could potentially be derived from the detected constituents.

   c. Facility's Potential Impact on Human Health and the Environment
      Provide a discussion describing the landfills potential impact on human health and the environment based on the analysis performed in the event post-closure activities are discontinued.

F. Gas Management Evaluation

A gas management evaluation should be prepared that discusses the potential for gas to harm human health or the environment. The evaluation should include the following:

1. **Site Map**
   Provide a site map containing the following items:
   - facility boundary;
   - the waste management boundary;
   - the disposal unit boundary or boundaries;
   - gas monitoring well locations labeled with ID #;
   - gas vent or other gas management system location;
   - location of any geologic or hydraulic barriers to gas migration;
   - location of structures within 1000 feet of the facility boundary;
   - topographic contours reflecting current site conditions;
   - a bar scale;
   - north arrow; and
   - permanent structures.

2. **Gas Monitoring History**
   Provide a discussion of the history of gas monitoring of the site which should include: a description of the gas monitoring network; the dates and duration of any gas detected above the lower explosive limit (LEL) at the facility boundary or

over 25% of the LEL in any facility structure; and a discussion of the constituents detected at the site. Include a discussion of any remediation steps taken resulting from the detection of gas above the thresholds described above.

3. **Trends in Methane Levels**
   Provide a discussion of the trends seen in methane levels over time. Provide sufficient information to demonstrate methane levels have stabilized after declining over time. Provide modeling or gas generation data as needed to demonstrate that the facility is well past the peak landfill gas generation rate on the theoretical gas generation curve.

4. **Gas Monitoring Requirements**
   Provide a discussion of the gas monitoring requirements contained in the facility permit, applicable regulations, gas remediation plan, post-closure care plan, or any order or agreement entered into with the Department and a status report on how these requirements were met.

5. **Impact of Discontinuing Gas Monitoring**
   Provide a discussion describing the landfills potential impact on human health and the environment based on the analysis performed above in the event post-closure activities are discontinued. Be sure to address the following:
   - The potential for harm to the landfill cap if landfill gas management is discontinued;
   - The potential impacts to any structures located within 1000 feet of any waste disposal areas; and
   - The planned end use of the site and how the proposed end use could affect future landfill gas production.

G. Leachate Management

Provide an evaluation that discusses the potential for harm to human health or the environment if operation and maintenance of the leachate management system were discontinued. This evaluation should include the following:

1. **Leachate Generation Rate**
   Provide a discussion of the historical and current leachate generation rate at the site.

2. **Leachate Management System**
   Provide a discussion of the system used to manage the leachate and the performance of that system. Discuss the disposition of the leachate that is currently being generated when the system is turned off.

3. **Leachate Management Requirements**
   Provide a discussion of the leachate management or monitoring requirements contained in the facility permit, applicable regulations, post-closure care plan, or any order or agreement entered into with the DEQ and a status report on how these requirements were met.

4. **Constituents Present in Leachate**
   Provide a discussion of the constituents present in the leachate and the potential for those constituents to harm human health or the environment. If constituents are present, discuss the trends in constituent levels over time. Provide the analytical results of leachate analysis.

5. **Leachate Discharges**
   Provide a discussion of any leachate management system failures or releases and the facility's response to address the issue.

6. **Impact of Discontinuing Leachate Management**
   Provide a discussion of the potential for harm to human health or the environment if leachate management activities were discontinued. The leachate should be tested for any waste constituents that have been detected in the groundwater. The analysis should include, but is not limited to the following:

   a. Risk Assessment
      A risk assessment performed based on the constituents that have been detected in the groundwater during the active life and during the post-closure care period at the facility.

   b. Parent/Daughter Constituent Discussion
      A discussion of the constituents detected in the groundwater and any detected parent or daughter products and their levels. Include any potential daughter products that could potentially be derived from the detected constituents.

   c. Liner Stability
      Evaluation of the geotechnical stability of the waste mass due to leachate buildup; and evaluation of the hydraulic head placed on the liner should leachate management be discontinued.

   d. Facility's Potential Impact on Human Health and the Environment
      Provide a discussion describing the landfills potential impact on human health and the environment if PCC activities were to end, based on the analysis performed.

H. Stormwater Management

Provide an evaluation of the existing stormwater management controls at the facility and their potential to harm human health and the environment or other landfill

management systems should maintenance of these controls be discontinued. Discuss requirements of and compliance with the facility's VPDES permit if applicable.

I. Final Cover System (FCS) Activities

A FCS integrity evaluation should be prepared that discusses the potential for failure of the cap resulting in harm to human health or the environment.

1. **FCS Maintenance Requirements**
   Provide a discussion of historical FCS maintenance performed during the closure period, the dates and types of any major repairs and a summary of the current condition in terms of erosion potential and the establishment of vegetation. Examples of major repairs include slope failure, repairs of erosion that exposed waste or had the potential to compromise the cap system.

2. **Historical FCS Maintenance**
   Provide a discussion of the FCS maintenance requirements contained in the facility permit, applicable regulations, post-closure care plan, or any order or agreement entered into with the DEQ and a status report on how these requirements were met.

3. **Impact of Discontinuing FCS Maintenance**
   Provide a discussion of the potential for harm to human health or the environment if cap maintenance activities were discontinued.

J. Maintenance of monitoring systems and other appurtenances

On a site-specific basis, provide a discussion of each system (waste piles, equipment, site security, etc.) and describe its potential for harming human health or the environment if operation and maintenance of the system is discontinued. Please include a discussion of maintenance or monitoring requirements of these appurtenances contained in the facility permit, applicable regulations, PCC plan, or any order or agreement entered into with the DEQ and a status report on how these requirements were met.

K. Other applicable information

A discussion of any other pertinent steps to be implemented to reduce the potential of the facility to harm human health and the environment should be discussed. For example, if the owner or operator will abandon wells in accordance with procedures outlined in the permit, these activities should be discussed.

L. Financial Assurance

If the facility is requesting partial release from PCC, provide a revised annual PCC cost estimate for the remaining PCC activities to be continued.

M. Certification

Provide the P.E. certification required in accordance with 9 VAC 20-81-170.C.1.a. The certification should state that the PCC monitoring and maintenance period has been completed in accordance with the facility's Post-Closure Care Plan. Example language is provided in Figure 1and Figure 2.

N. Attachments

1. As-built final contour map of the facility.

2. Copies of all post-closure inspection reports or inspection logs used to record inspections performed by the owner/operator where they are available.

Figure 1 Recommended Certification for Full PCC Termination

I certify that post-closure monitoring and maintenance has been completed in accordance with the post-closure plan dated [date on the post-closure plan] for permit number [permit number] issued to [name of permittee], with the exception of the deficiencies noted below.

In addition, the facility has been evaluated in terms of its potential for harm to human health and the environment in the event that post-closure activities are terminated. This certification is based, in part, on my review of the [list applicable records, for example: groundwater, gas, leachate monitoring, maintenance, and inspection records] for this facility. This certification is also based, in part, on my inspection(s) of this facility conducted on [date(s) of inspection]. My inspection(s) of this facility included examination and review of the [list applicable inspections, for example: vegetative cover, final cover, surface water management systems, leachate management systems, gas monitoring systems, and groundwater monitoring systems].

Attached to this certification is my evaluation of the impact discontinuing post-closure monitoring and maintenance at [facility name], operated under permit [permit number], will have on human health and the environment.

The following discrepancies were noted when reviewing the post-closure care period:

Signature of Professional Engineer
Date and Stamp

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete.

Signature of Owner/Operator Date
Name, Title

Figure 2 Recommended Certification for Partial PCC Termination

I certify that post-closure monitoring and maintenance for [list specific monitoring or maintenance requirement to be discontinued] has been completed in accordance with the approved post closure plan dated [date on approved plan] for permit number [permit number] issued to [name of permittee] with the exception of the deficiencies noted below.

In addition, the facility has been evaluated in terms of its potential for harm to human health and the environment in the event that post-closure activities are terminated. This certification is based, in part, on my review of the [list applicable records, for example: groundwater, gas, leachate monitoring, maintenance, and inspection records] for this facility. This certification is also based, in part, on my inspection(s) of this facility conducted on [date(s) of inspection]. My inspection(s) of this facility included examination and review of the [list applicable inspections, for example: vegetative cover, final cover, surface water management systems, leachate management systems, gas monitoring systems, and groundwater monitoring systems].

Attached to this certification is my evaluation of the impact discontinuing [list monitoring or maintenance to be discontinued] at [facility name], operated under permit [permit number], will have on human health and the environment.

The following discrepancies were noted when reviewing the post-closure care period:

Signature of Professional Engineer
Date and Stamp

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete.

Signature of Owner/Operator Date
Name, Title

IV. TPCA EVALUATION REVIEW

The evaluation submitted to the DEQ should follow the general format outlined in Section III. The DEQ recognizes there may be some instances where a facility's technical data may require additional sections to be added to those listed in these submission instructions as a means of more fully characterizing the technical data available and conclusions derived thereof. These instructions set no limit on the number or topical content of such additional sections as long as the information directly pertains to that required of the evaluation as outlined in these instructions.

Acknowledgement from the department

Upon receiving the certification and the evaluation, DEQ will acknowledge receipt of the package. DEQ will review the post-closure certification and evaluation within 60 days of receipt.

If approval is granted to reduce PCC monitoring or maintenance activities, but some post closure activities will continue, a revised PCC plan will be required to reflect changes made to the PCC activities and/or monitoring requirements. A minor permit amendment will be required to update the PCC plan. In addition, other modules of the permit may require amendment to reflect the current requirements for PCC monitoring. Until the amendment is approved, the facility must comply with the terms of the existing permit.

If DEQ decides to grant approval for all PCC monitoring and maintenance activities to be discontinued or partial release from PCC activities, the DEQ will issue a letter acknowledging submittal of a technically complete application and requesting the Permittee/Owner to conduct public participation. The Permittee/Owner will conduct public participation in accordance with Section III.B of Waste Guidance Memo No. 01-2007: Post-Closure Care Termination, to discontinue PCC. Based on comments received from this meeting the Department will issue a letter granting the facility a release from post-closure care requirements or extend the post-closure care period. Financial assurance and annual fees will no longer apply to facilities having been released from post-closure care activities.